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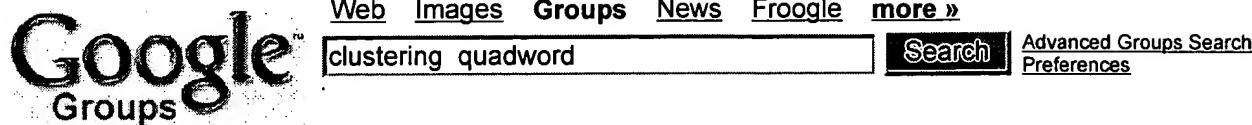
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Groups

Results 1 - 5 of 5 for **clustering quadword**. (0.25 seconds)

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Re: THINK C - A big gripe/A question about 6.0

... still pay attention to data alignments and manage their own code "**clustering**" in the ... It also reads **quadword** data, so DEC is suggesting that if you allocate a ...
[comp.sys.mac.apps](#) - Jul 27, 1993 by Fred Morris - [View Thread \(9 articles\)](#)

Re: RMS -- several responses

... Are you confusing **clustering**/allocation with last block/end-of-file? ... In the interests of "efficiency", you do allocate all of your buffers on **quadword** if not ...
[comp.os.vms](#) - Aug 20, 1993 by Fred Morris - [View Thread \(53 articles\)](#)

Re: Code needed to obtain system metrics

... VMS 64-bit binary time format (100-nanosecond ticks), so **quadword** subtraction (SUBL ... in ; will be greater than one per ; fault due to page fault ; **clustering** ...
[comp.os.vms](#) - Nov 2, 1987 by Jamie Hanrahan - [View Thread \(2 articles\)](#)

Re: VMS Vs any other OS

... say so, myself. :) I'd give **clustering**, the DCL command language, and RMS (the record management system) as examples. RMS for instance ...
[comp.os.vms](#) - Aug 7, 2000 by Harald Droste - [View Thread \(124 articles\)](#)

SUMMARY: Pls help: VAX+AXP cluster ...

... on VAX VMS V5.5-2 and Alpha AXP VMS 1.5 for the **clustering** to be ... However, remember that many Alpha compilers will try to **quadword** align data structures, so if ...
[vmsnet.alpha](#) - Aug 2, 1993 by Wong Siu To - [View Thread \(1 article\)](#)



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Published before December 2000
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Relevance scale 

1 [Shasta: a low overhead, software-only approach for supporting fine-grain shared memory](#) 

Daniel J. Scales, Kourosh Gharachorloo, Chandramohan A. Thekkath
 October 1996 **Proceedings of the seventh international conference on Architectural support for programming languages and operating systems**, Volume 30 , 31
 Issue 5 , 9

Full text available:  [pdf\(1.49 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

This paper describes Shasta, a system that supports a shared address space in software on clusters of computers with physically distributed memory. A unique aspect of Shasta compared to most other software distributed shared memory systems is that shared data can be kept coherent at a fine granularity. In addition, the system allows the coherence granularity to vary across different shared data structures in a single application. Shasta implements the shared address space by transparently rewriting ...

2 [Improving resource utilization of the MIPS R8000 via post-scheduling global instruction distribution](#) 

Raymond Lo, Sun Chan, Fred Chow, Shin-Ming Liu
 November 1994 **Proceedings of the 27th annual international symposium on Microarchitecture**

Full text available:  [pdf\(684.94 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

The paper presents a technique called Global Instruction Distribution that globally fine-tunes the code produced for a superscalar processor. The fine-tuning is effected by distributing instructions from one block to other blocks according to the control flow graph of the program. The method does not involve instruction scheduling, but models resource usage to find the best insertion points in the target basic block. We present our implementation of GID in a production compiler, and show how ...

Keywords: MIPS R8000, code optimization, global instruction distribution, instruction scheduling, multiple-issue processors, processor resource utilization

3 [Compiler transformations for high-performance computing](#) 

David F. Bacon, Susan L. Graham, Oliver J. Sharp
 December 1994 **ACM Computing Surveys (CSUR)**, Volume 26 Issue 4

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index](#)

Full text available:  [pdf\(6.32 MB\)](#)

[terms](#), [review](#)

In the last three decades a large number of compiler transformations for optimizing programs have been implemented. Most optimizations for uniprocessors reduce the number of instructions executed by the program using transformations based on the analysis of scalar quantities and data-flow techniques. In contrast, optimizations for high-performance superscalar, vector, and parallel processors maximize parallelism and memory locality with transformations that rely on tracking the properties o ...

Keywords: compilation, dependence analysis, locality, multiprocessors, optimization, parallelism, superscalar processors, vectorization

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1 [The effects of communication parameters on end performance of shared virtual memory clusters](#)

Angelos Bilas, Jaswinder Pal Singh

November 1997 **Proceedings of the 1997 ACM/IEEE conference on Supercomputing (CDROM)**Full text available: [pdf\(201.86 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#)

Recently there has been a lot of effort in providing cost-effective Shared Memory systems by employing software only solutions on clusters of high-end workstations coupled with high-bandwidth, low-latency commodity networks. Much of the work so far has focused on improving protocols, and there has been some work on restructuring applications to perform better on SVM systems. The result of this progress has been the promise for good performance on a range of applications at least in the 16-32 pro ...

Keywords: bandwidth, clustering, communication parameters, distributed memory, host overhead, interrupt cost, latency, network occupancy, shared memory

2 [Measurement and analysis of the error characteristics of an in-building wireless network](#)

David Eckhardt, Peter Steenkiste

August 1996 **ACM SIGCOMM Computer Communication Review , Conference proceedings on Applications, technologies, architectures, and protocols for computer communications**, Volume 26 Issue 4Full text available: [pdf\(168.08 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

There is general belief that networks based on wireless technologies have much higher error rates than those based on more traditional technologies such as optical fiber, coaxial cable, or twisted pair wiring. This difference has motivated research on new protocol suites specifically for wireless networks. While the error characteristics of wired networks have been well documented, less experimental data is available for wireless LANs. In this paper we report the results of a study characterizing ...

3 [Multi-protocol active messages on a cluster of SMP's](#)

Steven S. Lumetta, Alan M. Mainwaring, David E. Culler

November 1997 **Proceedings of the 1997 ACM/IEEE conference on Supercomputing**

(CDROM)Full text available: [pdf\(248.27 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#)

Clusters of multiprocessors, or Clumps, promise to be the supercomputers of the future, but obtaining high performance on these architectures requires an understanding of interactions between the multiple levels of interconnection. In this paper, we present the first multi-protocol implementation of a lightweight message layer---a version of Active Messages-II running on a cluster of Sun Enterprise 5000 servers connected with Myrinet. This research brings together several pieces of high-performa ...

4 [The shadow cluster concept for resource allocation and call admission in ATM-based wireless networks](#) 

David A. Levine, Ian F. Akyildiz, Mahmoud Naghshineh

December 1995 **Proceedings of the 1st annual international conference on Mobile computing and networking**Full text available: [pdf\(924.16 KB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

Keywords: active mobile probability, call admission, resource allocation, shadow cluster

5 [Session 14: cluster computing: Performance evaluation of three distributed computing environments for scientific applications](#) 

Rod Fatoohi, Sisira Weeratunga

November 1994 **Proceedings of the 1994 ACM/IEEE conference on Supercomputing**Full text available: [pdf\(839.77 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#)

We present performance results for three distributed computing environments using the three simulated CFD applications in the NAS Parallel Benchmark suite. These environments are the DCF cluster, the LACE cluster, and an Intel iPSC/860 machine. The DCF is a prototypic cluster of loosely coupled SGI R3000 machines connected by Ethernet. The LACE cluster is a tightly coupled cluster of 32 IBM RS6000/560 machines connected by Ethernet as well as by either FDDI or an IBM Allnode switch. Results of s ...

6 [A resource estimation and call admission algorithm for wireless multimedia networks using the shadow cluster concept](#) 

David A. Levine, Ian F. Akyildiz, Mahmoud Naghshineh

February 1997 **IEEE/ACM Transactions on Networking (TON)**, Volume 5 Issue 1Full text available: [pdf\(450.43 KB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

Keywords: active mobile probability, cal admission, resource allocation, shadow cluster

7 [A third-party value-added network service approach to reliable multicast](#) 

Kunwadee Sripanidkulchai, Andy Myers, Hui Zhang

May 1999 **ACM SIGMETRICS Performance Evaluation Review , Proceedings of the 1999 ACM SIGMETRICS international conference on Measurement and modeling of computer systems**, Volume 27 Issue 1Full text available: [pdf\(1.81 MB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

8 [Real-time support in multihop wireless networks](#) 

Chunhung Richard Lin, Mario Gerla
 March 1999 **Wireless Networks**, Volume 5 Issue 2

Full text available: [pdf\(161.58 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

Personal communications and mobile computing will require a wireless network infrastructure which is fast deployable, possibly multihop, and capable of multimedia service support. The first infrastructure of this type was the Packet Radio Network (PRNET), developed in the 70's to address the battlefield and disaster recovery communication requirements. PRNET was totally asynchronous and was based on a completely distributed architecture. It handled datagram traffic reasonably well, but did ...

9 On the performance of packet-switched cellular networks for wireless data communications

Jean-Paul M. G. Linnartz
 February 1995 **Wireless Networks**, Volume 1 Issue 2

Full text available: [pdf\(1.12 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#)

Cellular frequency reuse is known to be an efficient method to allow many wireless telephone subscribers to share the same frequency band. However, for wireless data and multi-media communications optimum cell layouts differ essentially from typical solutions for telephone systems. We argue that wireless radio systems for bursty message traffic preferably use the entire bandwidth in each cell. Packet queuing delays are derived for a network with multipath fading channels, shadowing, path lo ...

10 Flexible routing and addressing for a next generation IP

Paul Francis, Ramesh Govindan
 October 1994 **ACM SIGCOMM Computer Communication Review , Proceedings of the conference on Communications architectures, protocols and applications**, Volume 24 Issue 4

Full text available: [pdf\(1.20 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

Due to a limited address space and poor scaling of backbone routing information, the Internet Protocol (IP) is rapidly reaching the end of its useful lifetime. The Simple Internet Protocol Plus (SIPP), a proposed next generation Internet Protocol, solves these problems with larger internet layer addresses. In addition, SIPP provides a number of advanced routing and addressing capabilities including mobility, extended (variable-length) addressing, provider selection, and certain forms of mul ...

11 A survey of routing techniques for mobile communications networks

S. Ramanathan, Martha Steenstrup
 October 1996 **Mobile Networks and Applications**, Volume 1 Issue 2

Full text available: [pdf\(276.88 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Mobile wireless networks pose interesting challenges for routing system design. To produce feasible routes in a mobile wireless network, a routing system must be able to accommodate roving users, changing network topology, and fluctuating link quality. We discuss the impact of node mobility and wireless communication on routing system design, and we survey the set of techniques employed in or proposed for routing in mobile wireless networks.

12 Hierarchically-organized, multihop mobile wireless networks for quality-of-service support

Ram Ramanathan, Martha Steenstrup
 June 1998 **Mobile Networks and Applications**, Volume 3 Issue 1

Full text available:  pdf(429.81 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

MMWN is a modular system of adaptive link- and network-layer algorithms that provides a foundation on which to build mechanisms for quality-of-service provision in large, multihop mobile wireless networks. Such networks are a practical means for creating a communications infrastructure where none yet exists or where the previously existing infrastructure has been severely damaged. These networks provide communications for such diverse purposes as tactical maneuvering and strategic planning ...

13 Measured capacity of an Ethernet: myths and reality

D. R. Boggs, J. C. Mogul, C. A. Kent

August 1988 **ACM SIGCOMM Computer Communication Review , Symposium proceedings on Communications architectures and protocols**, Volume 18 Issue 4

Full text available:  pdf(1.54 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Ethernet, a 10 Mbit/sec CSMA/CD network, is one of the most successful LAN technologies. Considerable confusion exists as to the actual capacity of an Ethernet, especially since some theoretical studies have examined operating regimes that are not characteristic of actual networks. Based on measurements of an actual implementation, we show that for a wide class of applications, Ethernet is capable of carrying its nominal bandwidth of useful traffic, and allocates the bandwidth fairly. We di ...

14 Measured capacity of an Ethernet: myths and reality

D. R. Boggs, J. C. Mogul, C. A. Kent

January 1995 **ACM SIGCOMM Computer Communication Review**, Volume 25 Issue 1

Full text available:  pdf(1.31 MB)

Additional Information: [full citation](#), [abstract](#), [index terms](#)

Ethernet, a 10 Mbit/sec CSMA/CD network, is one of the most successful LAN technologies. Considerable confusion exists as to the actual capacity of an Ethernet, especially since some theoretical studies have examined operating regimes that are not characteristic of actual networks. Based on measurements of an actual implementation, we show that for a wide class of applications, Ethernet is capable of carrying its nominal bandwidth of useful traffic, and allocates the bandwidth fairly. We discuss ...

15 Linux Clusters at NIST

Wayne J. Salamon, Alan Mink

June 1999 **Linux Journal**

Full text available:  html(19.49 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

NIST is using Linux clusters for research, benchmarking them against super computers

16 An active service framework and its application to real-time multimedia transcoding

Elan Amir, Steven McCanne, Randy Katz

October 1998 **ACM SIGCOMM Computer Communication Review , Proceedings of the ACM SIGCOMM '98 conference on Applications, technologies, architectures, and protocols for computer communication**, Volume 28 Issue 4

Full text available:  pdf(1.80 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Several recent proposals for an "active networks" architecture advocate the placement of user-defined computation within the network as a key mechanism to enable a wide range of new applications and protocols, including reliable multicast transports, mechanisms to foil denial of service attacks, intra-network real-time signal transcoding, and so forth. This

laudable goal, however, creates a number of very difficult research problems, and although a number of pioneering research efforts are active ...

17 A quantitative analysis of cache policies for scalable network file systems

Michael D. Dahlin, Clifford J. Mather, Randolph Y. Wang, Thomas E. Anderson, David A.

Patterson

May 1994 **ACM SIGMETRICS Performance Evaluation Review , Proceedings of the 1994 ACM SIGMETRICS conference on Measurement and modeling of computer systems**, Volume 22 Issue 1

Full text available:  [pdf\(1.42 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Current network file system protocols rely heavily on a central server to coordinate file activity among client workstations. This central server can become a bottleneck that limits scalability for environments with large numbers of clients. In central server systems such as NFS and AFS, all client writes, cache misses, and coherence messages are handled by the server. To keep up with this workload, expensive server machines are needed, configured with high-performance CPUs, memory systems, ...

18 A hierarchical simulation environment for mobile wireless networks

R. Bagrodia, M. Gerla, L. Kleinrock, J. Short, T.-C. Tsai

December 1995 **Proceedings of the 27th conference on Winter simulation**

Full text available:  [pdf\(839.23 KB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

19 Analysis of design alternatives for a packet switched I/O system

Richard A. Upton, Satish K. Tripathi

May 1980 **Proceedings of the 1980 international symposium on Computer performance modelling, measurement and evaluation**

Full text available:  [pdf\(695.81 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

This paper describes an application of analytical modeling to the design and evaluation of a general purpose, packet-switched image processing system that will soon enter an implementation phase. A bottom-up modeling approach is used to evaluate such design issues as optimal packet size, optimal channel access method(s), and required number of processors and disks. Based on the characteristics of various hardware components and the predicted workload, specific design recommendations are made ...

20 Experimental queueing analysis with long-range dependent packet traffic

Ashok Erramilli, Onuttom Narayan, Walter Willinger

April 1996 **IEEE/ACM Transactions on Networking (TON)**, Volume 4 Issue 2

Full text available:  [pdf\(1.71 MB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#), [review](#)

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Garth A. Gibson, David F. Nagle, Khalil Amiri, Jeff Butler, Fay W. Chang, Howard Gobioff, Charles Hardin, Erik Riedel, David Rochberg, Jim Zelenka

October 1998 **Proceedings of the eighth international conference on Architectural support for programming languages and operating systems**, Volume 32 , 33

Issue 5 , 11

Full text available:  [pdf\(1.67 MB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

This paper describes the Network-Attached Secure Disk (NASD) storage architecture, prototype implementations of NASD drives, array management for our architecture, and three, filesystems built on our prototype. NASD provides scalable storage bandwidth without the cost of servers used primarily, for transferring data from peripheral networks (e.g. SCSI) to client networks (e.g. ethernet). Increasing dataset sizes, new attachment technologies, the convergence of peripheral and interprocessor switch ...

2 Intelligent information dissemination services in hybrid satellite-wireless networksEddie C. Shek, Son K. Dao, Yongguang Zhang, Darrel J. Van Buer, Giovanni Giuffrida
December 2000 **Mobile Networks and Applications**, Volume 5 Issue 4Full text available:  [pdf\(527.68 KB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

The need for rapid deployment and user mobility suggest the use of a hybrid satellite‐wireless network infrastructure for important situation awareness and emergency response applications. An Intelligent Information Dissemination Service <IIDS> has been developed to support the dissemination and maintenance of extended situation awareness throughout such a network information infrastructure in a seamless manner. One of the goals of IIDS is to transparently handle the mismatches ...

3 The design of nectar: a network backplane for heterogeneous multicomputersEmmanuel Arnould, H. T. Kung, Francois Bitz, Robert D. Sansom, Eric C. Cooper
April 1989 **ACM SIGARCH Computer Architecture News**, **Proceedings of the third international conference on Architectural support for programming languages and operating systems**, Volume 17 Issue 2Full text available:  [pdf\(1.73 MB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Nectar is a "network backplane" for use in heterogeneous multicomputers. The initial system

consists of a star-shaped fiber-optic network with an aggregate bandwidth of 1.6 gigabits/second and a switching latency of 700 nanoseconds. The system can be scaled up by connecting hundreds of these networks together. The Nectar architecture provides a flexible way to handle heterogeneity and task-level parallelism. A wide variety of machines can be connected as Nectar nodes ...

4 Communications networks for the force XXI digitized battlefield

Paul Sass

October 1999 **Mobile Networks and Applications**, Volume 4 Issue 3

Full text available:  [pdf\(745.29 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

In striving to meet the increasing demands for timely delivery of multimedia information to the warfighter of the 21st Century, the US Army is undergoing a gradual evolution from its "legacy" communications networks to a flexible internetwork architecture based solidly on the underlying communications protocols and technology of the commercial Internet. The framework for this new digitized battlefield, as described in the DoD's Joint Technical Architecture (JTA), is taken from t ...

5 MBCF: a protected and virtualized high-speed user-level memory-based communication facility

Takashi Matsumoto, Kei Hiraki

July 1998 **Proceedings of the 12th international conference on Supercomputing**

Full text available:  [pdf\(1.21 MB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

6 VAXcluster: a closely-coupled distributed system

Nancy P. Kronenberg, Henry M. Levy, William D. Strecker

May 1986 **ACM Transactions on Computer Systems (TOCS)**, Volume 4 Issue 2

Full text available:  [pdf\(1.25 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

A VAXcluster is a highly available and extensible configuration of VAX computers that operate as a single system. To achieve performance in a multicomputer environment, a new communications architecture, communications hardware, and distributed software were jointly designed. The software is a distributed version of the VAX/VMS operating system that uses a distributed lock manager to synchronize access to shared resources. The communications hardware includes a 70 megabit per second message ...

7 Dynamic multicast information dissemination in hybrid satellite-wireless networks

Eddie C. Shek, Son K. Dao, Yongguang Zhang, Darrel Van Buer

August 1999 **Proceedings of the 1st ACM international workshop on Data engineering for wireless and mobile access**

Full text available:  [pdf\(792.88 KB\)](#) Additional Information: [full citation](#), [references](#), [index terms](#)

Keywords: information dissemination, multicast, satellite networking, spatial clustering

8 Fast detection of communication patterns in distributed executions

Thomas Kunz, Michiel F. H. Seuren

November 1997 **Proceedings of the 1997 conference of the Centre for Advanced Studies on Collaborative research**

Full text available: Additional Information:

[pdf\(4.21 MB\)](#)[full citation](#), [abstract](#), [references](#), [index terms](#)

Understanding distributed applications is a tedious and difficult task. Visualizations based on process-time diagrams are often used to obtain a better understanding of the execution of the application. The visualization tool we use is Poet, an event tracer developed at the University of Waterloo. However, these diagrams are often very complex and do not provide the user with the desired overview of the application. In our experience, such tools display repeated occurrences of non-trivial commun ...

9 Switcherland: a QoS communication architecture for workstation clusters

Hans Eberle, Erwin Oertli

April 1998 **ACM SIGARCH Computer Architecture News , Proceedings of the 25th annual international symposium on Computer architecture**, Volume 26 Issue 3Full text available: [pdf\(1.32 MB\)](#) [Publisher Site](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Computer systems have become powerful enough to process continuous data streams such as video or animated graphics. While processing power and communication bandwidth of today's systems typically are sufficient, quality of service (QoS) guarantees as required for handling such data types cannot be provided by these systems in adequate ways. We present Switcherland, a scalable communication architecture based on crossbar switches that provides QoS guarantees for workstation clusters in the form of ...

10 U-Net: a user-level network interface for parallel and distributed computing (includes URL)

T. von Eicken, A. Basu, V. Buch, W. Vogels

December 1995 **ACM SIGOPS Operating Systems Review , Proceedings of the fifteenth ACM symposium on Operating systems principles**, Volume 29 Issue 5Full text available: [pdf\(1.84 MB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

11 Distributed rendering for scalable displays

Greg Humphreys, Ian Buck, Matthew Eldridge, Pat Hanrahan

November 2000 **Proceedings of the 2000 ACM/IEEE conference on Supercomputing (CDROM)**Full text available: [pdf\(812.09 KB\)](#) [Publisher Site](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

We describe a novel distributed graphics system that allows an application to render to a large tiled display. Our system, called WireGL, uses a cluster of off-the-shelf PCs connected with a high-speed network. WireGL allows an unmodified existing application to achieve scalable output resolution on such a display. This paper presents an efficient sorting algorithm which minimizes the network traffic for a scalable display. We will demonstrate that for most applications, our system provides ...

Keywords: Remote Graphics, Cluster Rendering, Tiled Displays, Distributed Rendering

12 An efficient communication protocol for high-speed packet-switched multichannel networks

Pierre A. Humblet, Rajiv Ramaswami, Kumar N. Sivarajan

October 1992 **ACM SIGCOMM Computer Communication Review , Conference proceedings on Communications architectures & protocols**, Volume 22 Issue 4Full text available: [pdf\(1.21 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

This paper proposes a new media-access protocol for high-speed packet-switched multichannel networks based on a broadcast topology, for example, optical passive star networks using wavelength-division multiple access. The protocol supports connection-oriented traffic with or without bandwidth reservation as well as datagram traffic, in an attempt to integrate transport-layer functions with the media-access layer. It utilizes the bandwidth efficiently while keeping the processing requirement ...

13 Architecture and implementation of a VLIW supercomputer

Robert P. Colwell, W. Eric Hall, Chandra S. Joshi, David B. Papworth, Paul K. Rodman, James E. Tornes

November 1990 **Proceedings of the 1990 ACM/IEEE conference on Supercomputing**

Full text available:  [pdf\(1.29 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#)

Very-Long-Instruction-Word (VLIW) computers achieve high performance by exploiting the fine-grain parallelism present in sequential or vectorizable code. Multiflow's /200 and /300 VLIW systems yielded near-supercomputer performance by this means despite the relatively slow (65 nS) clocks. With its much faster clock period (15 nS) and architectural improvements, the new /500 system attains approximately 4-9X the performance of its predecessors. This paper describes the /500 architecture and implem ...

14 High performance communication for MIMD supercomputers

Jochen Gries, Axel Hahlweg, Ralf Harneit, Axel Kern, Hans Christoph Zeidler

June 1991 **Proceedings of the 5th international conference on Supercomputing**

Full text available:  [pdf\(621.49 KB\)](#) Additional Information: [full citation](#), [references](#), [index terms](#)

15 Loss profiles: a quality of service measure in mobile computing

Krishanu Seal, Suresh Singh

March 1996 **Wireless Networks**, Volume 2 Issue 1

Full text available:  [pdf\(1.54 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

With rapid technological advances being made in the area of wireless communications it is expected that, in the near future, mobile users will be able to access a wide variety of services that will be made available over future high-speed networks. The quality of these services in the high-speed network domain can be specified in terms of several QOS parameters. In this paper we identify a new QOS parameter for the mobile environment, called loss profiles, that ensures graceful degradation ...

16 Performance and reliability analysis of relevance filtering for scalable distributed interactive simulation

Mostafa A. Bassiouni, Ming-Hsing Chiu, Margaret Loper, Michael Garnsey, Jim Williams

July 1997 **ACM Transactions on Modeling and Computer Simulation (TOMACS)**, Volume 7 Issue 3

Full text available:  [pdf\(499.11 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Achieving the real-time linkage among multiple, geographically-distant, local area networks that support distributed interactive simulation (DIS) requires tremendous bandwidth and communication resources. Today, meeting the bandwidth and communication requirements of DIS is one of the major challenges facing the design and implementation of large scale DIS training exercises. In this article, we discuss the DIS scalability problem, briefly overview the major bandwidth reduction techniques c ...

Keywords: bandwidth reduction, distributed interactive simulation, real-time protocols, scalable algorithms

17 Mobile wireless network system simulation

Joel Short, Rajive Bagrodia, Leonard Kleinrock

December 1995 **Proceedings of the 1st annual international conference on Mobile computing and networking**Full text available:  pdf(1.63 MB)Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)**18 An implementation and analysis of the virtual interface architecture**

Philip Buonadonna, Andrew Geweke, David Culler

November 1998 **Proceedings of the 1998 ACM/IEEE conference on Supercomputing (CDROM)**Full text available:  html(60.53 KB)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#)

Rapid developments in networking technology and a rise in clustered computing have driven research studies in high performance communication architectures. In an effort to standardize the work in this area, industry leaders have developed the Virtual Interface Architecture (VIA) specification. This architecture seeks to provide an operating system-independent infrastructure for high-performance user-level networking in a generic environment. This paper evaluates the inherent costs and performance ...

Keywords: cluster, interconnect, network, system-area, user-level, virtual interface architecture

**19 Tracking graphics state for networked rendering**

Ian Buck, Greg Humphreys, Pat Hanrahan

August 2000 **Proceedings of the ACM SIGGRAPH/EUROGRAPHICS workshop on Graphics hardware**Full text available:  pdf(354.74 KB)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

As networks get faster, it becomes more feasible to render large data sets remotely. For example, it is useful to run large scientific simulations on remote compute servers but visualize the results of those simulations on one or more local displays. The WireGL project at Stanford is researching new techniques for rendering over a network. For many applications, we can render remotely over a gigabit network to a tiled display with little or no performance loss over running locally. One of the ...

Keywords: graphics state, networked rendering, remote rendering

**20 The architecture and preliminary evaluation results of the experimental parallel inference machine PIM-D**

N. Ito, M. Sato, E. Kuno, K. Rokusawa

June 1986 **ACM SIGARCH Computer Architecture News , Proceedings of the 13th annual international symposium on Computer architecture**, Volume 14 Issue 2Full text available:  pdf(796.68 KB)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

A parallel inference machine based on the dataflow model and the mechanisms to support two types of logic programming languages are presented. The machine is constructed from multiple processing elements and structure memories interconnected through a low-latency hierarchical network. The preliminary evaluation results of the experimental machine are also presented. The evaluation results show that the machine can exploit parallelism in



programs.

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